UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL

E

Distr.
LIMITED

E/ECA/CM.16/17
13 February 1989

ENGLISH
Original: FRENCH

ECONOMIC COMMISSION FOR AFRICA

Eleventh meeting of the Technical Preparatory Committee of the Whole

Tripoli, Libyan Arab Jamahiriya
5-12 May 1990

ECONOMIC COMMISSION FOR AFRICA

Twenty-fifth session of the Commission/ sixteenth meeting of the Conference of Ministers

Tripoli, Libyan Arab Jamahiriya
15-19 May 1990

LC/NAIROBI.

RIVER AND LAKE BASIN DEVELOPMENT IN AFRICA

90-668

I. INTRODUCTION

1. The development of water resources, especially of river and lake basins, has been a major concern in Africa for more than two decades.

2. During this period, great efforts were made by African States to establish various organizations and to implement their programmes with a view to improving their socio-economic conditions.

3. The international community, especially the Economic Commission for Africa (ECA) in the context of its water resources programme, has been concerned about assisting the river basin countries and organizations in implementing the necessary priority measures in fulfillment of the Mar del Plata Plan of Action within the context of the Lagos Plan of Action.

4. At the twenty-second session of the Commission and thirteenth meeting of the ECA Conference of Ministers held in Addis Ababa in April 1987, resolution 600 (XXII) requested ECA to support and assist the existing river- and lake-basin development organizations and to consider the possibility of creating new ones.

5. Pursuant to that resolution, the commission provided advisory services to some river- and lake basin development organizations during the last two years in order to help them with the preparation of technical documents.

6. In co-operation with UNDP, it has also convened and organized several consultations with riparian countries of the Nile basin in order to foster co-operation among them for the integrated development of the basin. The latest developments on these consultations are included in this document.

7. Also, as part of its activities, the Commission convened and organized, in co-operation with the Department of Technical Co-operation for Development (DTCD), an important inter-regional meeting in October 1988, to study new strategies for river and lake basin development that would make for sustained socio-economic growth and development in Africa. Important recommendations on resource evaluation and planning, legal and institutional aspects, obstacles and ecological matters, were made during the meeting.

8. The present report forms part of those activities and follows an earlier study prepared in 1987. It is aimed both at informing the ECA Conference of Ministers on current developments and at making participants aware of the difficulties and obstacles faced by the river- and lake-basin development organizations.

9. A brief background of each organization will be given before describing recent developments. The first part of the report deals with the river basins having mechanisms for effective co-operation, while the second part focuses on those basins still lacking such mechanisms.

II. PROGRESS REPORT ON EXISTING ORGANIZATIONS

A. Organization for the Development of the Gambia River (OMVG)

10. The Organization for the Development of the Gambia River was created in 1978 following FAO assistance for the establishment of a Gambia/Senegal joint commission in 1964 for the exploitation of the basin's resources.

11. In 1980, the Republic of Guinea joined the Organization and three years later, Guinea-Bissau also became a member. With Guinea-Bissau's membership, the Organization had to include the development of the following two basins:

(a) The Kayanga Geba basin embracing Guinea, Senegal and Guinea-Bissau; and

(b) The Koliba/Corubal basin concerning only the Republics of Guinea and Guinea-Bissau.

12. As intended by the member States, the outline of the River Gambia basin development programme is based on the following three projects:

(a) The Kouya dam in Guinea;

(b) The Kekreti dam/reservoir in Senegal; and

(c) The Balingho salt control bridge-dam.

13. In 1980, the conference of Heads of State endorsed the following projects:

(a) The constructions of the Kekreti, Balingho and Kouya dams;

(b) The launching of a post-dam programme aimed at the extension of irrigated farming;

(c) The integration of environmental and socio-economic studies into the programme in order to control the adverse effects of developing the Gambia river basin;

(d) The study on the development of the Kolibantang and Kayanga-Geba basins in Guinea-Bissau; and

(e) The completion of studies on the Saltinho dam on the Corubal river also located in Guinea-Bissau.

14. The programme required about $US 200 million in addition to complementary and pre-investment study costs estimated at $US 6 million.

15. Alongside these large-scale programmes, the Organization carried out pilot studies on small-scale agricultural, water and irrigation projects in co-operation with qualified experts from member States. Since 1985 and 1986, the

Organization has completed studies on the following two small areas in the Republic of Guinea:

(a) The Donguel Siman Area; and

(b) The Samcarlé area.

In fact, these activities have been a great success owing to the use of local resources, the involvement of the people and low costs.

16. Unlike the small-scale projects the large ones cited above are in different stages of implementation. Some are at the pre-feasibility stage while others are at the identification stage.

17. It should also be noted that integrated development within the basins cannot be effective without the movement of goods between the isolated and the port areas. Hence the river carrier plans to conduct a detailed study on all modes of transport, especially road and river transport, directly linked to the approved OMVG programme.

18. Faced with such a situation, the Organization is seeking funds to conduct the following studies aimed at enhancing knowledge about the various basins:

(a) Feasibility study on the Kouya and Kogoutoulou dams;

(b) Final technical design study on the Kekreti dam;

(c) Study on the operations and reciprocal effects of the Kouya, Kekreti and Balingho dams;

(d) Study on the integrated development of the Koliba-Corubal and Kayanga-Geba basins;

(e) Strengthening of the Koliba-Corubal and Kayanga-Geba hydro-meteorological network; and

(f) Additional studies on the socio-economic and environmental aspects of the upper Gambian basin.

19. Moreover, with regard to studies on small-scale projects, the Organization is still seeking funds to enable it continue studies already embarked upon and to extend such studies to the other basins in the subregion.

20. Up to 1986, the Organization received $US 27 million of external aid for pre-investment studies. It can be said that OMVG is currently at the critical stage of its history with regard to this vast programme.

21. In spite of efforts to stabilize their economies, member States are experiencing financial difficulties that stand little chance of being resolved given the prevailing economic situation.

31. The Manantali and Diama dams thus became operational in 1986 and 1986, respectively.

32. The construction of the two dams has, since 1986, made it possible to reduce the risks of flooding during the rainy season, both in the irrigated areas and in towns within the basin.

33. Along with the implementation of the first phase of the joint dam-construction programme, OMVS embarked on a search for additional financing to consolidate its investments on such projects as access roads, road linking Diama to the Rosso-Nouakchott road and afforestation; the second phase included the development of electric power stations, the Saint Louis and Kayes ports and other ports of call.

34. At the end of 1986, the programme required $US 996 million of additional financing for the period 1986-1991.

35. Although it is, in all respects the most advanced river- and lake-basin development organization in Africa, OMVS is today at its most crucial post-dam stage, during which it must not only continue searching for financing as well as implementing the second phase of the joint programme but should also create conditions for the optimal use of basic infrastructure.

36. Unfortunately, given the economic and financial situation facing member States, the success of activities of the Organization depends almost exclusively on external technical and financial assistance.

37. However, faced with such a situation, the Organization is striving to secure the resources that would enable it to carry on the development of the river by adopting the following decisions.

(a) Restructuring of the High Commission;

(b) Policy guidance of the management organs of the joint projects and their over technical supervision; and

(c) Consideration of the long-term costs and benefits with the technical assistance of ECA.

C. Niger Basin Authority (NBA)

38. The agreement establishing the River Niger Commission was signed in 1964 by the following nine countries of the river basin: Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Guinea, Mali, the Niger and Nigeria.

39. During the first 15 years, the Commission's objectives were very limited, consisting of basic information gathering, analysis and dissemination as well as dealing with river navigation and transport problems.

40. In 1979, the Heads of State met in an extraordinary session and decided to change the Commission's leanings.

41. Pursuant to the recommendations of that summit meeting, the River Niger Commission became the River Basin Authority, in 1980, with the following objectives:

(a) To promote co-operation among member States; and

(b) To ensure the integrated development of the basin.

42. With the birth of the new organization, a prospective plan for the development of the Niger basin was formulated.

43. In 1981, a biennial plan summarizing the prospective plan was prepared and its implementation required about $US 56 million of financing.

44. Until 1982, donor consultations had resulted in financial pledges which somewhat materialized with USAID assisting in an amount of $US 3 million and OPEC, EDF, CIDA and UNDP, assisting with the following projects:

(a) The HYDRONIGER project;

(b) A river modelling project;

(c) An inter-State project centred on multipurpose hydraulic study;

(d) A planning unit project;

(e) A west African electricity grid planning project; and

(f) An agricultural development planning project.

45. During the same period, member states accordingly deployed the necessary personnel to the NBA, strengthened economic co-operation and set up a hydrological planning network.

46. Despite the efforts made, NBA was to suffer from tax management coupled with lack of regular payments and contributions.

47. In 1986, the Council of Ministers meeting in Niamey comprehensively reviewed the plight of the NBA and adopted a series of recommendations.

48. In 1987, the Summit of Heads of State and Government held in N'Djamena approved the recommendations and decided to take recovery measures aimed at redefining objectives, reorienting NBA's activities, restructuring the secretariat, appointing a new Executive Secretary and obtaining the needed funds for the successful implementation of the organization's programme.

49. Although most of the member States had given financial support to the Authority, such support was indeed insufficient to meet the needs of the organization.

50. NBA still remained handicapped by the same difficulties such as lack of funds for its smooth operation.

51. In December 1988, the NBA Ministers convened a special session in Bamako to give a new impetus to the Authority.

52. During the above-mentioned session, many important resolutions were passed and measures taken which included:

(a) Technically, the Council adopted the five-year plan, (1989-1993) consisting partly in carrying out long-term development pre-planning studies and activities and partly in identifying an immediate - impact development programme of action;

(b) Administratively, four officials were appointed including the Executive Secretary;

(c) Financially, the Council adopted the following three measures:

(i) A provisional operating budget for the Authority, for the first half of 1989;

(ii) Securing the commitment of member States to provide counter part financing for the HYDRONIGER project;

(iii) Appealing to member States to pay in regularly their contributions to the operating funds of the Authority.

(d) With regard to external aid, the new Executive Secretary would be mainly concerned with preparing the necessary documents for a donor consultative committee meeting.

53. In this way, the Niger Basin Authority secured a new lease of life in December 1988, for its rehabilitation.

D. Lake Chad Basin Commission (LCBC)

54. The Lake Chad Basin Commission derives its authority from the Heads of State and Government who meet once every other year.

55. The Commission is headed by an Executive Secretary assisted by six Directors of Divisions.

56. According to the Convention of May 1964 establishing the Commission, its objective was to concentrate initially on studies and research aimed at

preventing such exploitation of the basin's waters which may be harmful at the national and regional levels.

57. The conventional area of the basin at the time was only 427,000 sq. km. which was about one-sixth of the total area of the lake's drainage basin.

58. In order to extend the limits of the basin and to include the sources of Rivers Logone and Chari so as to raise the water level of the lake, the Commission during its fifth Summit of Heads of State and Government, held in 1983, invited the Central African Republic to join it.

59. Thus, since 1985, the Commission has had five member states namely, Cameroon, Chad, the Niger, Nigeria and the Central African Republic.

60. During the 1985 session, the summit requested the Commission to review its 1951 Programme of Action, based on results of earlier studies.

61. The Commission has, thereafter, oriented its activities towards more concrete actions with the following results:

(a) In the agricultural sector, five agricultural development centres and one training centre have been established;

(b) In animal husbandry, five centres are currently in operation. One of the major activities of these centres is to ensure that animals are protected against diseases through repeated vaccination campaigns;

(c) In the forestry sector, there are two centres whose objective is to control the ecological deterioration of the environment and desertification. Their major role is to produce plants to be used by the people in the future as firewood and other wood products;

(d) In the area of fishing, the Daimalio training centre whose activities had been suspended since 1979 is currently being revived with the assistance of ECA and FAO;

(e) In the area of water resources, the Commission has carried out the following activities over the past few years:

(i) The sinking of 46 bore-holes and 23 cemented wells to provide water for people and livestock;

(ii) The holding in 1977 of a seminar on the basin's water resources;

(iii) Study projects on underground water resources, with financial support from Fond d'aide et de cooperation (FAC) amounting to CFAF 75 million;

(b) Energy

The energy sector is accorded priority in the KBO programme; thus, feasibility study on the Rusomo Falls hydro-electric power project has been completed. A detailed model of the dam project is currently being developed.

(c) Agriculture

The KBO is presently carrying out the following agricultural projects geared towards food self-sufficiency:

(i) Tsetse fly control and eradication in various pilot areas in member States;

(ii) Water drainage in the Mulindi valley to allow for rational land and livestock management. Relevant feasibility studies have been completed since 1988 and the Organization is currently looking for financing of about $US 2.05 million to execute the project;

(iii) The afforestation programme in South-West Uganda is considered as one of the Organization's priorities as it will make for a greater equilibrium of the environment. Feasibility studies on this programme were completed in 1985 and external funding of about $US 8.57 million is required for its execution; and

(iv) An irrigation programme for developing rice cultivation at the Sango Bay is currently under study but the project is still at its identification stage.

(d) Information and training

In this sector, a documentation centre has already been established in Rwanda and feasibility studies on a project for the establishment of a polytechnic has been completed since 1985. The Organization is searching for about $US 12.2 million of financing for its execution.

81. In summary, it therefore appears that the Kagera Basin Organization has performed reasonably well in the execution of its work programme.

82. However, recent developments show that the KBO, like most other organizations, is going through severe financial constraints. In fact, given the economic situation in the region, member States find it difficult to pay their contributions.

83. The consequences of the economic situation on the Organization are considerable, especially on its operation and work programme.

III. RECENT DEVELOPMENTS IN THE INTEGRATED DEVELOPMENT OF OTHER RIVER AND LAKE BASINS

A. The Nile basin

84. The Nile basin is the next largest in Africa, after the Congo/Zaire basin. It extends over an area of about three million sq.km. The river has two sources: the lakes at the Equator which constitute its major source from which originates the White Nile (6,700 km) and the Ethiopian plateau from which Blue Nile, Sobat and Atbara systems take their source.

85. The river basin covers nine States, namely: Burundi, Egypt, Ethiopia, Kenya, Rwanda, the Sudan, the United Republic of Tanzania, Uganda and Zaire.

86. Economically, six of the nine countries of the basin are among the poorest or least developed countries.

87. Although there are bilateral agreements on utilization of the basin's water, given the magnitude of the basin's water resources and the role of these resources in the socio-economic development of the concerned riparian countries, it is becoming increasingly more important to carry out objective planning and management studies covering the whole basin.

88. It was with this in view that UNDP organized in Bangkok, Thailand, in 1960, a seminar for the riparians. The interest authorities of the countries of the basin participated in the seminar. They all recognized the importance of regional co-operation among them, and several recommendations were approved by the seminar.

89. Pursuant to these recommendations, UNDP and ECA organized a joint pre-identification mission aimed at clarifying certain issues raised by the States, on the one hand, and on the other aimed at proposing a co-operation framework which, initially, would be limited to the White Nile drainage basin alone. The mission held discussions with representatives of all the other countries except Ethiopia. ECA and UNDP felt, at that time, that a Ministerial meeting should not be convened before the identification mission was undertaken. All the countries, except Sudan, welcomed the proposal.

90. In April 1966, it was agreed to convene an informal consultation of the Nile basin riparian countries during the ECA Conference of Ministers, in Niamey. All the riparian countries, except Burundi, were represented during the consultation. During the discussions, all participants agreed that there was a need for further consultations. ECA and UNDP accordingly received the mandate to convene and organize future meetings. Individual countries were required to make efforts to arrange and organize preliminary consultations at the national level.

91. In fulfillment of this mandate, ECA, in co-operation with UNDP, accordingly convened and organized in January 1989 a ministerial meeting of the basin's riparian countries. All the other States except Ethiopia were represented.

92. The conclusions and recommendations of that meeting led ECA and UNDP to convene an extraordinary meeting of the Technical Committee on the Kampala HYDROMET project in February 1989. Although there were difficulties during the meeting, the conclusions reached were positive.

93. In fact, after amending the terms of reference of the study mission on the development of the Nile Basin, the Committee decided that the mission should work in close co-operation with national experts in order to draw up a comprehensive list of joint projects.

94. During the consultations, Ethiopia was requested to participate in future discussions and activities.

95. After the meeting, the identification mission was prepared and conducted. The UNDP-led team was composed of a specialist from ECA and seven specialists from member countries. In more than a month (June 1989), the mission had visited all the riparian countries concerned.

96. The mission report was submitted at the end of July 1989, and transmitted to member States two months before the Technical Committee meeting held at a workshop in Addis Ababa from 23 to 27 October 1989.

97. During the meeting in which nine countries were represented, the Ethiopian delegation produced amendments to the terms of reference or the fact-finding mission. Other observations were also made by Egypt, the Sudan and Tanzania. The representatives felt that the observations made by Ethiopia had changed things and that it was necessary to consult their Governments. The meeting, therefore, proposed that the consideration of the report should be postponed until responses were received from the other countries. Ethiopia's proposal that the terms of reference should be reviewed. Consequently, it was decided that the Technical Committee of the HYDROMET project should receive the comments made by individual countries and organize another meeting in March 1990.

98. The meeting once more requested ECA and UNDP to continue rendering assistance so that the integrated Nile basin development projects could be continued and fully executed.

B. The Zambezi River basin

99. River Zambezi and its tributaries drain an area of about 1,300,000 sq.km. It is an enormous hydrographic complex with its source in the plateau of Central Africa, crossing the African continent generally in the west-East direction and flowing into the Indian Ocean. The basin has a population of about 20 million.

100. Without a comprehensive resource inventory it is difficult to manage the basin.

101. At the request of the Governments concerned, UNEP in line with its Environmentally Sound Management of Inland Water Programme in Africa (EMINWA) assisted the countries of the basin to conduct an analytical study and prepare a plan of action.

102. Thus, with the assistance of UNEP, three meetings were held, successively, in 1985, 1986 and 1987 in which experts from the countries concerned participated. The experts meeting defined the starting point of the Zambezi plan of action, commonly known as the ZAC plan.

103. The region to be covered in the plan of action embraces all eight countries of the basin namely: Angola, Botswana, Malawi, Mozambique, Namibia, the United Republic of Tanzania, Zimbabwe and Zambia.

104. The reviewed plan of action was adopted during the conference of plenipotentiaries of the Zambezi system held in 1987.

105. The Zambezi Plan of Action has a very wide scope and, in fact, constitutes an ambitious integrated regional development programme, based on the water resources of the basin including its ecological components. The network of data collection institutions set up in the countries of the basin working in co-operation with the EMINWA programme of UNEP would improve information sharing at the subregional level and accelerate the implementation of the plan of action.

106. During the meeting of Ministers responsible for agriculture and natural resources of the Southern African Development Co-ordination Conference (SADCC), held in Maseru in 1987, it was agreed that the Zambezi Plan of Action should be a programme of SADCC. Currently therefore, all activities for the implementation of the plan of action are co-ordinated by SADCC.

107. Certain Scandinavian countries are jointly preparing a specific development programme within the context of the plan.

108. UNEP will continue to render assistance, on a case-by-case basis for certain project elements.

C. The Congo/Zaire Basin

109. The Congo/Zaire basin is the largest in Africa and the second largest in the world after the Amazon basin. It covers an area of about 3,700,000 sq.km. and embraces nine countries namely: Angola, Burundi, Cameroon, Central African Republic, the Congo, Rwanda, the United Republic of Tanzania, Zambia and Zaire.

110. The basin has great potentials for transport, irrigation, fishery and energy which had never been rationally exploited by the riparian countries.

111. In 1963, following requests from the Burundi, Rwanda and Zaire Governments, ECA had to conduct a study to consider the various possibilities of developing and exploiting the Congo/Zaire rivers and their tributaries.

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